OPEN GEOSOCIAL API

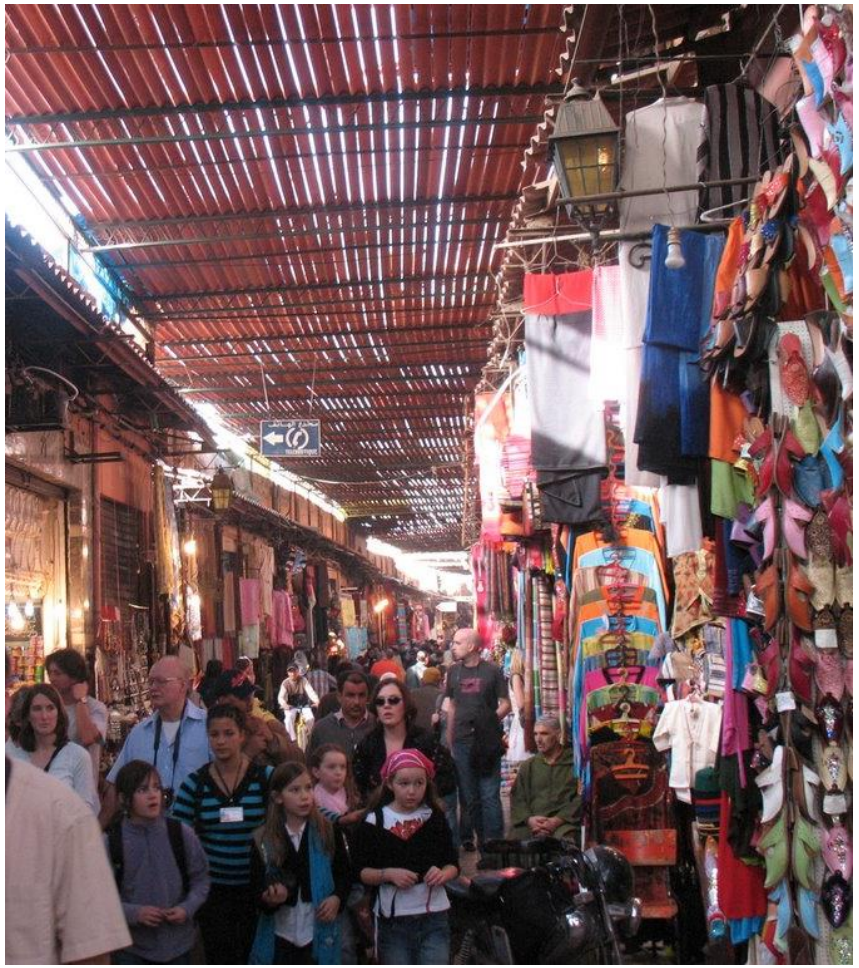
2014 HyspIRI ~~Data~~ **Products** Symposium

NASA GSFC

Greenbelt MD

June 04-06, 2014

LET'S TALK ABOUT PRODUCTS NOT DATA



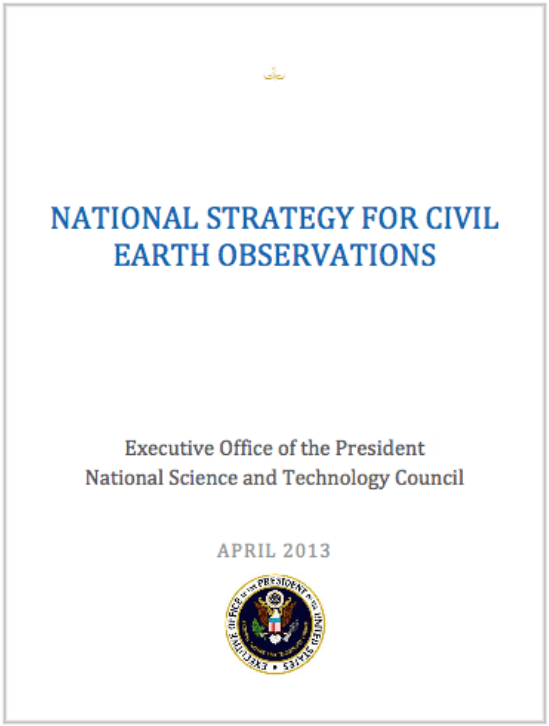
Pat Cappelaere

pat@cappelaere.com

SOCIETAL PRODUCTS

A New Mandate

- *Enable Civil Earth Observations Capabilities For The Benefit Of Society*
- *Provide Information for Societal Benefit*
- *Deliver Information in A Timely Manner to End-Users and Decision Makers*
- *Ensure That Users Can Both Find and Visualize the Data*

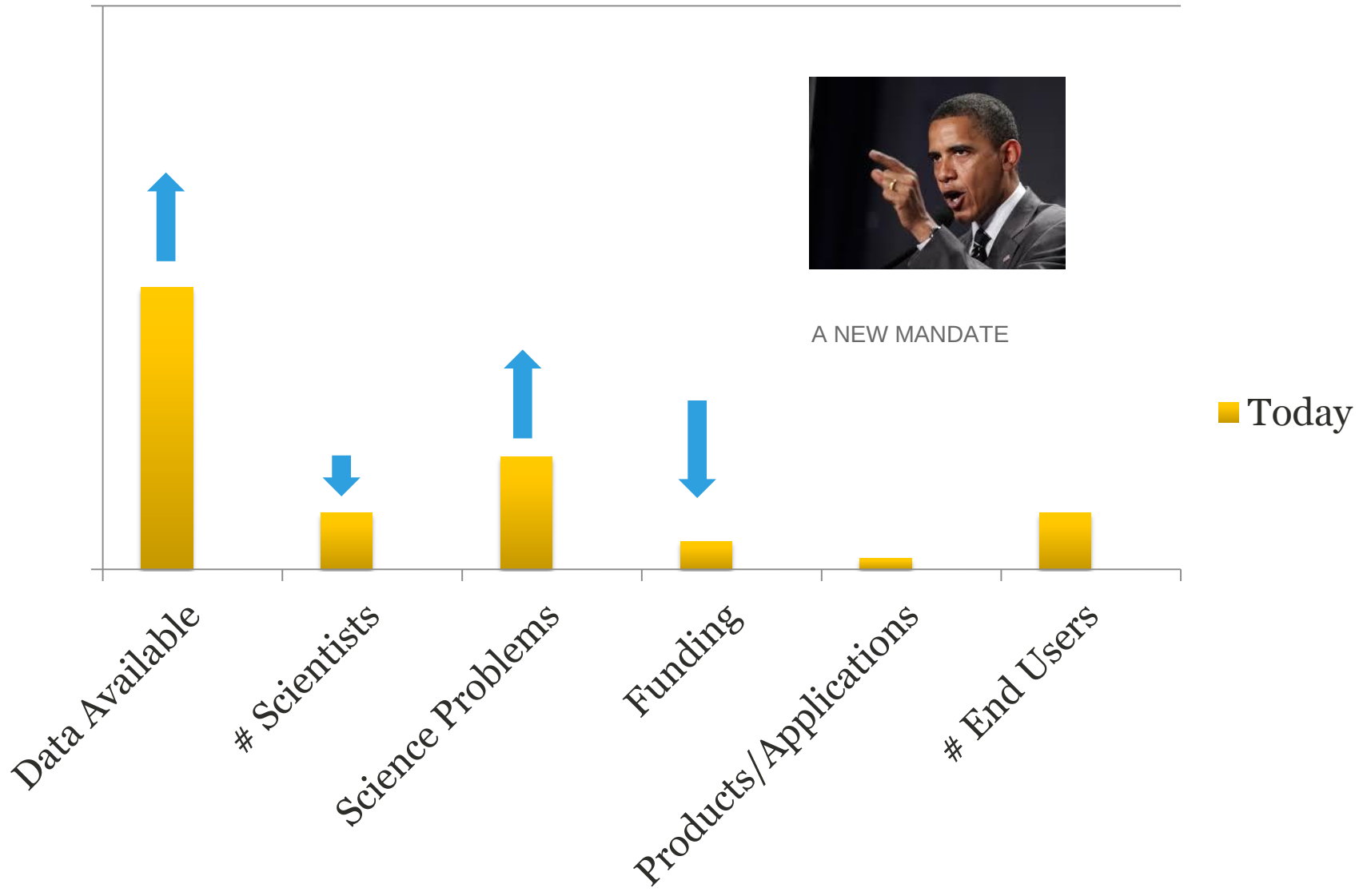

NATIONAL STRATEGY FOR CIVIL EARTH OBSERVATIONS

Executive Office of the President
National Science and Technology Council

APRIL 2013

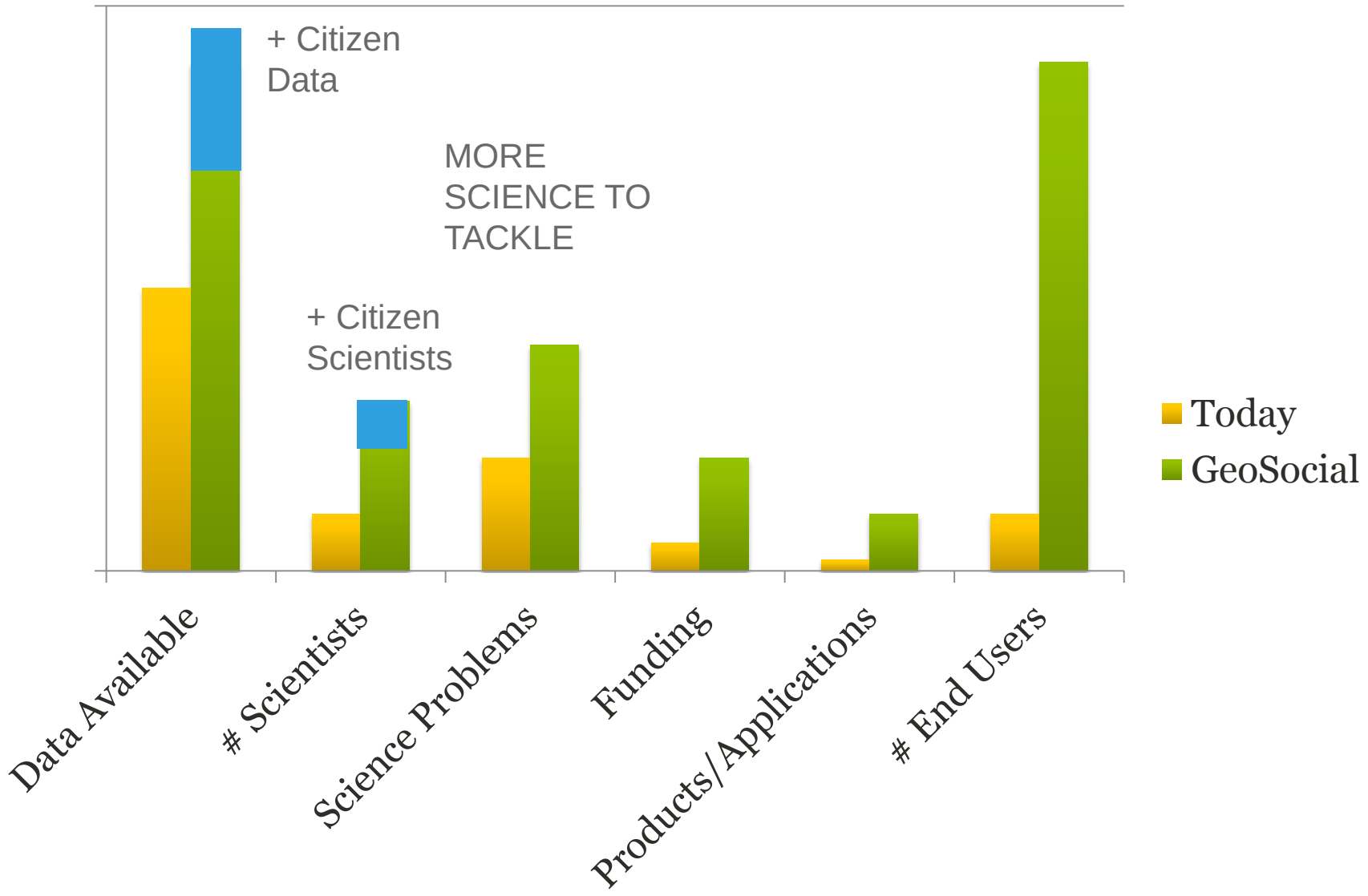
TODAY'S REALITY & CURRENT PRESSURES

A NEW MANDATE



OPPORTUNITY

A LITTLE MORE PRODUCTS TO MANY MORE USERS
-> SOCIETAL BENEFITS -> CREATE MORE DEMAND…
-> GENERATE MORE FUNDING FROM MORE SOURCES



FROM A PURE SCIENCE PERSPECTIVE, IS THIS A BETTER PLACE TO BE?

OPENING BHAG

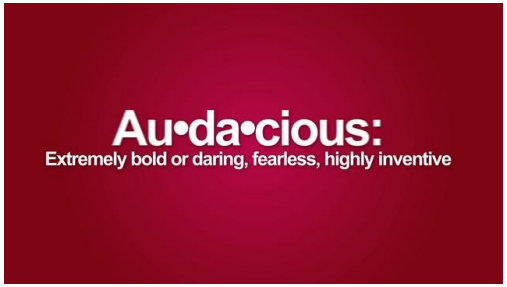
"Big Hairy Audacious Goal", Jim Collins

TO RESPOND TO NEW MANDATE

Open Geo-Social API

Empowers **People** to Quickly Discover, Share and Mimic to Turn [Earth Science Data] **Product**s Into

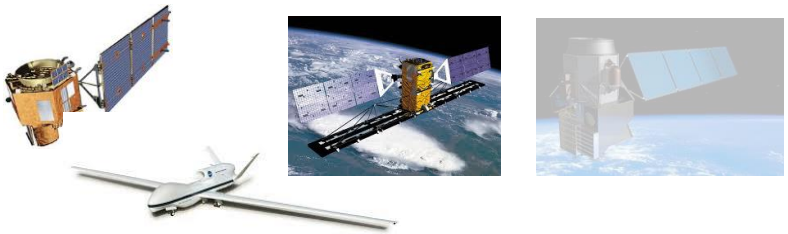
[Societal] **Action**able Information.



OPEN GEO-SOCIAL API

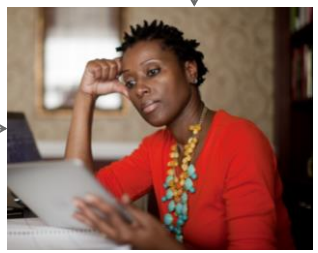
- Generate User Products That Can Be Used As Actionable Information
- Tag your Products To Make Stories and Push Stories to Social Networks To Enable Discovery
- Use An Ubiquitous Product Distribution Format for the Net. Think Mobile Platforms
- Provide A Higher Level Hypermedia API To Shield Users From Infrastructure Details. You Want To Make It Easy to Generate, Access, Download Products

GEOSS ARCHITECTURE FOR DISASTERS



SHARE, DISCOVER

ON-DEMAND
LOW-LATENCY PRODUCTS



DISADVANTAGED USER

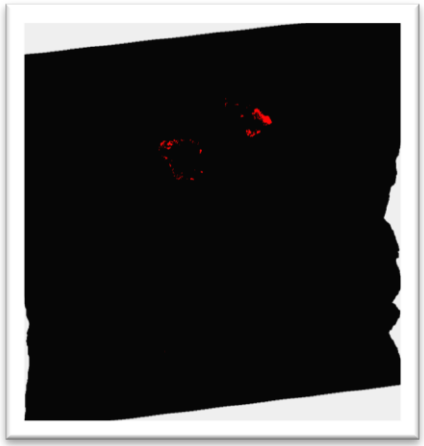
MOBILE APP

MODELS

Product Publishing Servers

Regional Nodes
(SERVIR, PRC…)

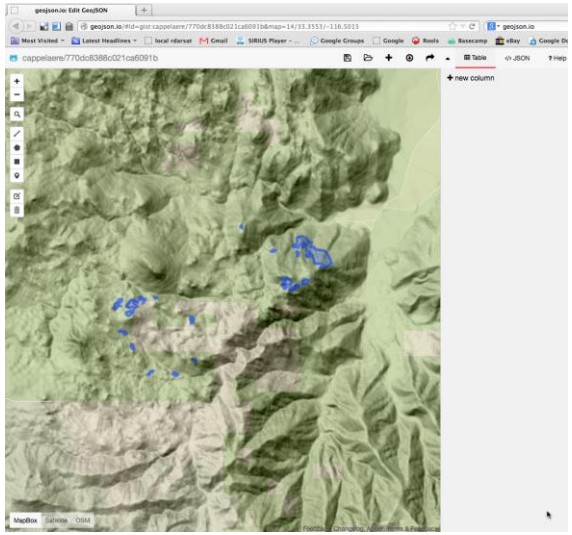
LOW LATENCY PRODUCT FORMAT: TOPOJSON (A VARIANT OF GEOJSON)



WE HAVE THE CAPABILITY TO GENERATE TOPOJSON ONBOARD (C++)

EXAMPLE: HOT PIXELS: 2KB COMPRESSED (AS DATA NOT JPG)

[WE HAVE DONE: FLOOD MAPS, BURN SCARS, LANDSLIDES…]

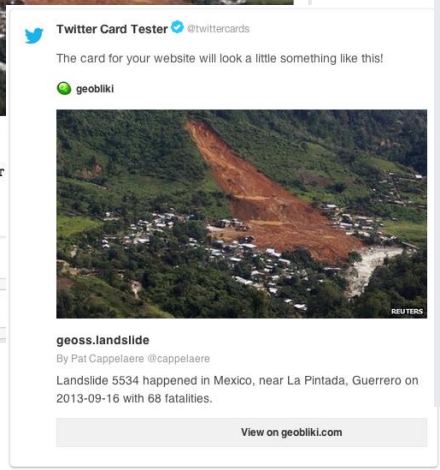


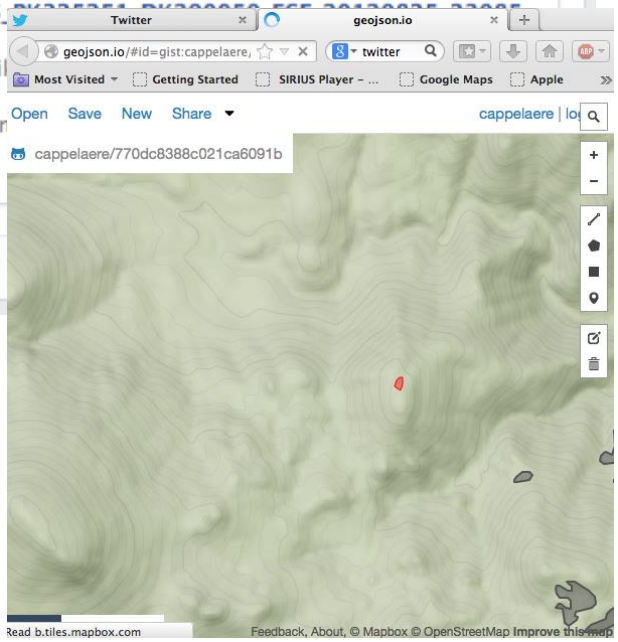
OR EASILY PUSHED TO A MOBILE PLATFORM

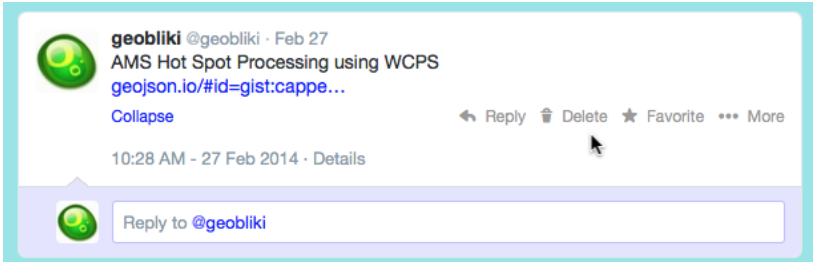
CAN BE VISUALIZED ON
WEB AND SHARED WITH OTHERS WITHOUT ANY SPECIAL SOFTWARE

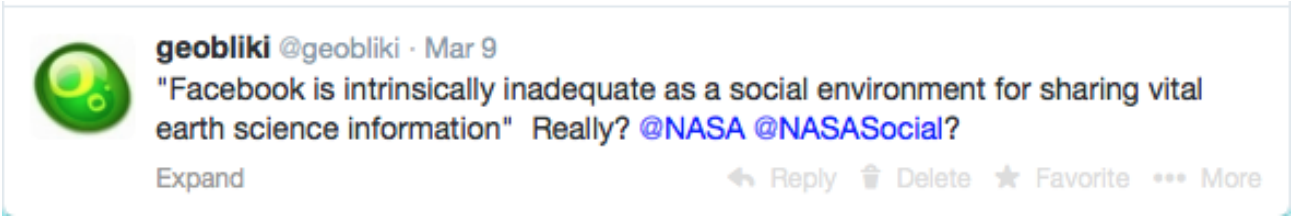
SCIENCE DATA ON SOCIAL NETWORKS

NEAR REALTIME NOTIFICATIONS









CALL TO ACTION

DEFINE PRODUCT SEMANTICS SO WE CAN SHARE [GEOSS/ESIP/OGC]

PUBLISH MORE PRODUCTS USING HIGHER LEVEL GEOSOCIAL API

LETS COLLABORATE FOR DISASTERS…

AND PARTICIPATE:

- AIP-7 PILOTS… TALK TO STU FRYE (stuart.w.frye@nasa.gov)

- GEO-APPATHON

Screencasts

OJO-GeoApp
Video 2:31 / Created 14 days ago HERE

Geo-Social API Screencast
Video 4:08 / Created 7 weeks ago HERE

Thank You

contact information

Dan Mandl
daniel.j.mandl@nasa.gov

Stu Frye
stuart.w.frye@nasa.gov

Pat Cappelaere
pat@cappelaere.com
410 340 4868